

Topic: Radical expressions**Question:** Simplify the expression.

$$\sqrt{50}$$

Answer choices:

A $5\sqrt{2}$

B $2\sqrt{5}$

C 10

D 50



Solution: A

We know that 25 is a factor of 50, and also a perfect square, so we'll factor 50 as $25 \cdot 2$ and then write the square root of the product (of 25 and 2) as the product of the square roots.

$$\sqrt{50}$$

$$\sqrt{25 \cdot 2}$$

$$\sqrt{25}\sqrt{2}$$

Taking the square root of 25, we get

$$5\sqrt{2}$$



Topic: Radical expressions**Question:** Simplify the expression.

$$14 + \sqrt{16}$$

Answer choices:

- A 17
- B 18
- C 19
- D 20



Solution: B

We know that 16 is a perfect square, so we'll take its square root.

$$14 + \sqrt{16}$$

$$14 + 4$$

$$18$$



Topic: Radical expressions**Question:** Simplify the expression.

$$\sqrt{200}$$

Answer choices:

A $\sqrt{300}$

B $2\sqrt{3}$

C $10\sqrt{2}$

D $8\sqrt{2}$



Solution: C

We know that 100 is a factor of 200, and also a perfect square, so we'll pull that out.

$$\sqrt{200}$$

$$\sqrt{100 \cdot 2}$$

$$\sqrt{100}\sqrt{2}$$

Take the square root of 100.

$$10\sqrt{2}$$

